

REMARKS

Claims 1-14 remain pending in the present application. Claims 1, 8, 10 and 11 have been amended. Claims 12-14 are new. Basis for the amendments and new claims can be found throughout the specification, claims and drawings originally filed.

REJECTION UNDER 35 U.S.C. § 102

Claims 1, 3-7 and 8-11 are rejected under 35 U.S.C. § 102(b) as being anticipated by LaCombe (U.S. Pat. No. 5,872,890).

Claim 1 has been amended and now recites a first temperature detecting means for detecting a temperature at a first position of the fluid passage which is located adjacent to the heating device and is heated by the heating device, and a second temperature detecting means for detecting a temperature at a second position of the fluid passage which is spaced apart from the heating device on a downstream side of the heating device. As clearly shown in Fig. 1 of LaCombe (U.S. Pat. No. 5,872,890), both the first and second temperature detecting means (117, 116) are placed in contact with the heating device (13). Thus, unlike Claim 1, neither of the first and second temperature detecting means (117, 116) of LaCombe (U.S. Pat. No. 5,872,890) is spaced apart from the heating device (13) on a downstream side of the heating device (13). Furthermore, Claim 1 also recites that when a temperature difference between the temperature detected by the first temperature detecting means and the temperature detected by the second temperature detecting means is greater than a predetermined level, the control means stops heating operation of the heating device. As recited in column 6, lines 10-13 of LaCombe (U.S. Pat. No. 5,872,890), the second thermistor

117, i.e., the first temperature detecting means forms part of a control loop, which turns the power to the heater element (25) via a cable on and off to maintain a desired temperature. Thus, the purpose of the first temperature sensing means (117) of LaCombe (U.S. Pat. No. 5,872,890) is to keep the desired temperature of the water. Furthermore, as recited in column 6, lines 13-16 of LaCombe (U.S. Pat. No. 5,872,890), the first thermistor 116, i.e., the second temperature detecting means is part of a high-limit thermostat loop, which shuts off the heater element (25) in the event that the thermostat circuit including the second thermistor 117 fails. Thus, LaCombe (U.S. Pat. No. 5,872,890) does not disclose the obtaining of the difference between the temperature detected by the first temperature detecting means and the temperature detected by the second temperature detecting means. Also, LaCombe (U.S. Pat. No. 5,872,890) does not disclose the control means, which stops heating operation of the heating device when it is determined that the temperature difference between the temperature detected by the first temperature detecting means and the temperature detected by the second temperature detecting means exceeds the predetermined level.

Thus, Applicants believe Claim 1, as amended, patentably distinguishes over the art of record. Likewise, Claims 3-7, which ultimately depend from Claim 1, are also believed to patentably distinguish over the art of record. Reconsideration of the rejection is respectfully requested.

Claim 8 has been amended and now recites a first sensor for detecting a temperature of the fluid around the heating device and a second sensor for detecting a temperature of the fluid at a position which is spaced apart from the heating device on the downstream side of the heating device and which is proximate to a fluid inlet of the

heat exchanger. As discussed with respect to Claim 1, none of the first and second sensors (117, 116) of LaCombe (U.S. Pat. No. 5,872,890) is spaced apart from the heating device (13) on a downstream side of the heating device (13). Furthermore, Claim 8 also recites that when a temperature difference between the temperature detected by the first sensor and the temperature detected by the second sensor is greater than a predetermined level, the control means stops heating operation of the heating device. As discussed with respect to Claim 1, this feature of Claim 8 is not recited in LaCombe (U.S. Pat. No. 5,872,890).

Thus, Applicants believe Claim 8, as amended, patentably distinguishes over the art of record. Likewise, Claims 9-11, which ultimately depend from Claim 8, are also believed to patentably distinguish over the art of record. Reconsideration of the rejection is respectfully requested.

REJECTION UNDER 35 U.S.C. § 103

Claim 2 is rejected under 35 U.S.C. § 103(a) as being unpatentable over LaCombe in view of Pokorny, et al. (U.S. Pat. No. 6,205,292). Claim 2 depends from Claim 1. As stated above, Claim 1 has been amended and is now believed to patentably distinguish over the art of record. Thus, Claim 2 is also believed to patentably distinguish over the art of record. Reconsideration of the rejection is respectfully requested.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

By:


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